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Atari Online News, Etc.
A-ONE Online Magazine
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A-ONE #0207

02/18/00

~ People Are Talking! ~ Classic Gaming Expo 2K ~ New Apple i-Book
~ Dreamcast Digital Cam! ~ Windows 2000 Released! ~ 'Window Washer'!
~ More DoubleClick Woes! ~ Building Better Games! ~ 3DO Pipeline!
~ FBI Caseload Quadruples ~ Connectix Ruling Turned ~ Close To Hackers?

-* 63,000 Bugs In Windows 2000! *-
-* Classic Computer And Gaming Fair 2K *-
-* Secret Microsoft Negotiations Springs Leak *-

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->From the Editor's Keyboard
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"Saying it like it is!"

This is one of those weeks in which there's a lot that I'd probably like to say, but in one of those moods that tend to sap motivation. It's an external influence that seems to have drained my creativity this week. I'm sure that all of us come across this type of "energy" loss from time to time.

I do want to briefly comment on the current internet hacking stuff that's been all over the news the past couple of weeks. While I have some doubts that these hackers will all be caught, perhaps this kind of "net terrorism" will be the impetus for tighter net security. Consumers - all of us using the web - need to be assured that our rights of privacy and our personal security is maintained by those who operate various sites. Be they online retailers, banking, stocks, search engines, or whatever - all need to safeguard against these individuals who somehow feel compelled to pull these stupid stunts. The more that it's publicized that various areas on the internet are less secure that we're led to believe, the more likely the end users will be to use them.

See, I kept it brief! Thankfully, the weekend is upon us and I have an opportunity to re-charge! And if we're lucky up here in the Northeast, the storm that is approaching moves north up into the mountains, or goes south and out to sea. I'm really not looking to spend my weekend shoveling out lots of snow!

Until next time...

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->A-ONE User Group Notes! - Meetings, Shows, and Info!
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CCAG '2000
Classic Computer And Gaming Fair 2000

Date: June 10 2000
Location: National Guard Armory
Route 57, Lorain, Ohio, USA (Just 25 minutes West of Cleveland)
Cost: FREE! For both vendors and spectators!

Setup: June 9, 2000
4PM-10PM For Inside Vendors and User Groups only
Fair: June 10, 2000
9AM-6PM
"Flea Market" Vendors can start setup at 7AM

Systems: All Classic computer or gaming system: Atari, Intellivision, Magnavox, Commodore, TI, Amiga, Timex, ADAM, Nintendo, Sega, etc.

We will try to accommodate all late comers, but the deadline for inside table reservations is May 9, 2000 one month before the CCAG.

Donations will be gladly accepted to help cover expenses. Remember, this CCAG is free to both the spectators and vendors. We are located close to several fast-food restaurant, no refreshments will be served at the CCAG.

Please stay tuned a URL will be made available shortly with a map, lodging information and more.

For further info please contact:

CCAG 2000

P.O. Box 493

Chesterland OH 44024-0493

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Phone 440-979-9295 ask for Jim Jr.

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or

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PEOPLE ARE TALKING
compiled by Joe Mirando
jmirando@portone.com

Hidi ho friends and neighbors. As I write this, we're preparing for a winter storm. I guess that I can't complain too much since this has been a fairly uneventful winter. I just keep telling myself that, come July, I'll be looking back at this storm with fond memories.

Yeah, yeah, I know... that's a load of bunk but, hey, I've got to tell myself SOMETHING to keep from going nuts.

On the PC Linux front, I finally got my modem card working. It took a while, but I'm proud to be able to tell you that I did it all by myself. It turned out to be an IRQ problem. Geez, I got interested in Linux mainly because I was tired of dealing with things like IRQ conflicts under Microsoft's offerings. All in all, it was a useful experience because I did actually learn some things about Linux while searching for the cause of the problem.

Remember the first time someone handed you that tired old line about learning more from your mistakes than from your successes? I thought it was foolish too. But the more I mess around with computers the more I find that it's true. Sometimes the only way to actually get acquainted with something is to have to dig down into the guts of it, pull 'em out, and rebuild it so that it works. In the process you get to actually see how and why things work.

Of course, not everyone is cut out for that kind of thing. And that's... okay. What's important is that you're comfortable with what you're doing. People who use computers simply as tools need only understand the merest basics to be able to do what they need to do. But for people like us, to whom computers are a hobby unto themselves, want and need to know what's going on "under the hood". To me, that's the coolest part of using a computer. If that's not your cup of tea, that's cool too. As long as you're comfortable, you're in your "happy place". <grin>

Well, let's get on with the news, hints, tips, and info available on the UseNet.

From the comp.sys.atari.st NewsGroup
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Tim Conrardy asks for info on RAM:

"My 4 meg 1040Ste's power supply just went out, so I got out my spare 520ST that I was using for games. Most of my Midi stuff works on it (including Notator!) It is a 1 meg machine.

I was wondering if I can use the memory chips in my 1040STe and put them in the 520 for the extra memory"

Nicholas Bales tells Tim:

"A 520 ST has 512K, not 1Mb as standard. Therefore, if you are sure that the machine has 1Mb, then there is probably a RAM expansion board inside. Open it up or use sysinfo to find out for sure:

<http://bales.online.fr/atari/files/sysinfo.zip>

If you are using it for games, there is no point in going beyond 1Mb.

If there is a RAM expansion board inside, then there were several sorts. Some had fixed RAM just to upgrade a 520 to 1040, others had SIMM sockets. The only way to be sure is to open it up.

Wouldn't it be better to use the power supply from the ST inside the STE ?"

Tim tells Nick:

"This 520St has an EXTERNAL power Supply, so I wish it was that easy. I called Best Electronics, and Brad said they are not interchangeable, but he 's got'em for \$75.00 and I can install it myself. I might do that, even though it is a little pricy. I could use the extra memory especially on Notator. However I might open it up and see what's there any way now that you got me curious!"

Nick replies:

"Well, remove the STE PSU, drill a hole in the STE case, build a connector to the external PSU (not sure what the pinouts are, but this can probably be deducted). Then you have some extra space inside for a 3.5" IDE drive!!!"

Greg Goodwin asks for help "slaving" his ST to his 8-bit:

"Realizing this program is quite old, I'm hoping someone out there still has knowledge of this. I'm trying to get my ST to act as my hard drive for

my Atari 8-bit computer. The program I have found is "800XL DeeJay" which is a cute little program that allows an 8-bit to access the ST via an SIO2PC cable.

I've got the cable, the two computers, and I've tried various configurations, but still the 8-bit does not recognize the ST as a disk drive with the 800XL DeeJay program running. What are some things to keep in mind when trying to get this to work?"

Andreas Magenheimer tells Greg:

"Check out the Com-Port, in which you plug in the SIO2PC cable. Some ST computers (and especially Falcon computers !!) have to be modified to work properly with XLDeejay and SIO2PC. Since I do not own any ST/STE/TT/Falcon computers, I do not know which sort of modification has to be made... but wait, there was a TT user asking for a good XL emulator, maybe you can give him the XLDeejay..."

And finally I hope there is anybody who can help with the XLDeejay problem (and modification) soon."

Daniel Guldkrans asks about his new STE:

"Since I have never owned a Ste, only a STfm in various ram sizes I have one simple question: Are all STe SIMM card upgradable? I heard that some STe have SIPP (or something like that!?) card instead. Does this matter if I just replace the ones in the SIMM slot with four 1 Mb SIMM cards to get 4 Mb STe.

I upgraded my STfm with a Frontier ram upgrade board to get 1 Mb and it works beautiful.

Oh, one more thing: Does all the STe have a RF modulated video outlet (I'm unsure if it's the right word?) like the STfm have? It really doesn't matter since I can connect it to a scart TV instead from the monitor outlet."

Steve Stupple tells Daniel:

"Yep! just replace the memory in your 1 meg machine with 4 x 1 meg SIMM's or SIPP's (if it doesn't take simms).

All STE's have a RF modulator to connect to a TV."

Nick Bales jumps in and adds:

"Yes, some of the older STEs use SIPP sockets instead of SIMM.

SIPP and SIMM are compatible, but the connections are different. SIPP modules have pins soldered on their edges which are inserted into holes, whereas SIMM have edge connectors. There are SIPP to SIMM adapters. If in doubt just open up the machine to check. It's better to get a machine with SIMM sockets, because SIMMs are more easily available."

Steve Taylor asks about using a removable hard drive with his Falcon:

"Has anyone used an Iomega ZIP 250 with their Falcon or ST? My Syquest 270MB SCSI drive is starting to die, so I am looking to buy another SCSI removable media drive. I thought since the ZIP 100 drive works, the 250 should also. I am using the AHDI driver."

Dr. Uwe Seimet tells Steve:

"Don't know about AHDI but HDDRIVER will work, including the use of special ZIP features like password protection, auto-sloop, auto-park."

Steve comes back and asks:

"After reading the previous comment about the ZIP drives, I asked the guy at the computer store about the Orb. He said he hooked one up to his computer and it was *really* fast. Uwe, will HD Driver handle this product? What about the 2.2 GB cartridges? Will I have to partition them, or will HDD let me use the whole thing?"

Dr. Seimet tells Steve:

"Basically HDDRIVER supports any SCSI/IDE/ATAPI drive. So I don't expect any problems. For HDDRIVER it's sufficient if the drive supports one of these standards.

As far as partitioning is concerned, this is not a question concerning HDDRIVER but it has to be asked with respect to TOS and the file systems used. The usual limitations apply for any kind of media. Standard FAT partitions are size-limited by TOS, e. g. 1 GByte on the Falcon, 512 GByte on the TT. If you want a larger partition you have to create a FAT32 or EXT2FS partition and run MagiC and/or MiNT. HDDRIVER supports all these alternatives."

Mike Freeman cuts loose and posts:

"Ok, so I just got absolutely frustrated with CAB tonite. Are we ever going to have a web browser that actually works for modern internet purposes?!?!?!"

I love my Falcon, but honestly, it sucks as an Internet machine. My wife and I got information in the mail about renewing financial aid for school. Unfortunately, instead of the usual forms, everything is being done online now. Well, CAB doesn't work for it at all. First, it requires a secure browser, meaning that unless you're a rocket scientist who can understand the inner workings of MintNet, you're stuck there. Second, the buttons on their form site don't go anywhere under CAB. The button appears dark, but CAB doesn't even attempt to go anywhere. So we'll have to find a PC somewhere...

The University also does everything online now. At its web site, you can choose either text or graphics based page. The graphics-based link doesn't redirect correctly, bringing up a file not found error. The text based link brings up a dialog box. On PC's, it gives you some information that you must enter into it:

"Please enter your student-id followed by the following number:xxxxxx"

CAB however (at least with the current CAB.OVL's) displays its own pre-written dialog, meaning that you aren't given the number, therefore you can't enter it. Once again, have to find a PC somewhere...

This happens on nearly every serious site that we need to go to. It either requires Javascript or needs some other feature CAB apparently doesn't have. So are we ever going to get a good browser with everything the web needs, or are we stuck with archaic browsers that PC browsers

outdated years ago?

I'm really tired of this crap. I'm not about to give up on my Atari, but I don't have room on my desk (or desire) to get a PC. I hope someone gets their butt in gear and develops a working modern browser soon. I just can't spend the time required hunting down available computer labs on campus.

Sorry for the venting. Anyone willing to get going on a browser project instead of just talking and arguing about it? Any suggestions welcome, also."

Charles Silver tells Mike:

"All may not be lost yet <grin>. Please give me the Uni's URL and I'll see if I can find a work around so that at least you can get the graphics or text page working. CAB some times inserts an extra letter into the URL links which will give you the file not found error. If Alex had developed CAB as well as he did iCAB, well, we wouldn't be having this discussion."

Our good friend TJ Andrews asks about adding a hard drive to his Mega:

"I have a Mega ST4 with a Toadfile 44 hard drive, a gift from a longtime friend. The drive was purchased in 1990 and used heavily for about 5 years, then lightly for two, then not at all until a little over a year ago, when I got it. I've used it fairly heavily while I've had it, and now I'm beginning to worry about it. After all, components age, lubricants dry up, and bearings wear out eventually.

Another friend has given me an external Syquest 200Mb Removable drive originally designed for use with a Mac which he says is also able to read/write 44 and 88 Mb carts, but can't format them. This is a SCSI drive, with internal SCSI termination and two external Centronics-type 50-connector SCSI ports.

I'd like to add this to my Mega system. I've always understood you can connect up to 8 SCSI devices to a single host adapter, so I'd like to use the ICD ADSCI Plus adapter (The one with the clock) that's within the Toadfile. However, when I opened up the Toadfile, I saw but a single 50-connector ribbon cable between the host adapter and the HD, with no unused connectors. I also saw a knockout in the back that looks like just the right size for an external SCSI connector.

I'm assuming I need a different SCSI cable inside the Toadfile, a panel mount adapter to some sort of external connector, and an external SCSI cable for the "new" drive. Could anyone give me an idea of precisely what to look for, and a good place to look? Also, since I have an empty slot for an internal device in my Toadfile case, would it be a good idea to buy a cable now that could be used with that slot in the future? And if so, would I need to terminate the (for now) unused cable?"

Greg Goodwin tells TJ:

"From the ICD adapter, run an internal 50 ribbon SCSI 1 cable to the HD and back out. This cable should be easy to obtain at a electronics supply shop and basically looks like the cable you have, only with a third connector midway. Keep your cabling as short as possible. Then an internal to centronics 50 (external) adapter attaches to the case (your knockout, er, knocks out). A SCSI 50/50 external cable then runs to your "other" drive. If you cannot find an electronics store, a place that deals with SCSI (like older Macs) should be able to help.

I don't know if I'd modify things to use your other space in the Toadfile case. Your power supply might not be able to handle it, particularly due to its age. As a final note, only terminate the first and final drive on a SCSI chain (though there are exceptions). I've done quite a bit of SCSI work on both Ataris and Macs in the last couple years, so post if you have problems."

Now TJ asks about using an IGS file with NEWSie:

"I've been trying to append a cutesy signature to some of my email using Newsie 0.94, and so far it's been a total failure. I put a signature file together with Edit Plus 3.12 and saved it. Then, I configured Newsie to find it using the "Signature Preferences" item of the Preferences menu, and saved it as the default. When I look at the Signature Preference I see the proper path and filename, and the first few lines of my signature file, so I assume that part's incorrect. When I sent me email, I X'ed the box marked "Append Signature." Nothing. I tried X'ing the box both before and after editing the email--neither way worked.

What am I doing wrong? I'm using Edit Plus 3.12 as the external editor, and other features work just fine with it. I really don't think that's the problem.

I can live just fine without the ability to append cutesy signatures to my email. In fact, I expected to soon get tired of it and go back to dull and boring after a while. It's just that it galls me to not be able to figure out something that looks so simple to do. I just know I'm gonna feel stupid when this gets solved."

John Garone tells TJ:

"Although there's no problem here using Newsie94/Everest with regard to Sig files, have you tried another editor? Also, once in a while I re-load a Newsie back-up of needed files (in case a glitch got added somewhere)."

TJ finds that reducing the number of lines in the SIG file to five or less solves the problem and posts:

"I just read my posts from the 14th, and it certainly does appear to have worked. I wrote the post before this one offline last night, but didn't send it until I logged on tonight, before I read the posts from the 14th. I wrote those posts offline, too, and I looked at them in the "Offline Postbox" before sending them. I didn't think it worked, because the signatures didn't appear when I read from the "Postbox." It seems the signature isn't added until the message is actually sent, something I didn't realize until tonight. I think the turning point was Xing the "Append Signature" box in the "Message Options" dialog. I hadn't done that before, relying on the box in the "Send" dialog alone.

I apologize for the mess of my last few posts, and for the irritation I allowed into them. I'll try to avoid such things in the future. I don't know if I'll keep a signature file or not. Most probably, I'll get tired of it very quickly. Until then, though, I shall be...

TJ - Keeper of the Flame

Atari Computer Enthusiast of Syracuse"

Now, do you remember what I said before about having to "dig" to figure

Connectix developed its software after studying the PlayStation BIOS, although the company says that the application contains no Sony code.

The Appeals Court, in its ruling, reversed the lower court's findings, saying that its examination of the BIOS was protected by fair use and that the resulting program did not appear to violate Sony's rights.

"Intermediate copies made and used by Connectix during the course of its reverse engineering of the Sony BIOS were protected fair use, necessary to permit Connectix to make its non-infringing Virtual Game Station function with PlayStation games," the court wrote.

Being able to sell the software doesn't mean Connectix' fight is over. Sony is considering whether or not it will seek relief from the ruling, and a trial date is still pending.

"This decision seems to eliminate copyright protection for software that's embedded in machines," James Gilliland, lawyer for Sony Computer Entertainment, told Associated Press. Gilliland said Sony invested a significant amount of money in the PlayStation. "They'll have to think twice before doing that again if emulator folks can come along with a very minor investment and create competitors this way," he said.

"We believe this landmark decision will have broad ramifications throughout the software and other media industries," said Roy McDonald, CEO of Connectix in a statement. "This ruling supports the clear goal of U.S. copyright law to allow fair use of prior works to create new intellectual property which broadens consumer choice."

Sony's suit against Connectix is tentatively scheduled to go to trial in June before the same judge who issued the injunction against Connectix last year.

Infogrames North America, Inc. Reveals Details On the Spine-Tingling Thriller, Alone in the Dark

Good vs. Evil; Dark vs. Light; Sacred vs. Sinister; All is not right with the world when you are Alone in the Dark!

Infogrames North America, Inc. officially announced today the return of the notorious supernatural detective, Edward Carnby in a new frightening chapter of Alone in the Dark. Based on the popular and revolutionary Alone in the Dark (AITD) series, this new rendition (subtitle soon to be revealed) will bring terrifying thrills and adventures to gamers this fall on the Sony PlayStation, Sega Dreamcast, PC and Game Boy Color.

The original survival-horror franchise continues with a pure blend of intense action and suspenseful adventure. Alone in the Dark immerses the player into a dark and strange atmosphere where conventional rules do not apply. The player must overcome his natural fear of the dark unknown and control Edward Carnby through a deep and highly detailed storyline. Armed with a flashlight and a pistol, Carnby must find the necessary items to survive as well as the clues to help him escape his ultimate nightmare.

"Infogrames is pulling out all the stops for Alone in the Dark," said David Riley, marketing director for Infogrames North America Inc.'s action/strategy label. "As the originator of the survival-horror genre,

the Alone in the Dark series is known for its bone-chilling suspense and excitement -- adding the latest technology and ingenuity to AITD will bring the genre and the series to a whole new level in the new millennium."

The story begins with a murder mystery. Charles Fiske, Carnby's best friend, has been found dead on a mysterious island off the coast of Maine, Shadow Island. Carnby's instinct tells him that foul play was involved and goes to Shadow Island to find the killer and avenge Fiske's death.

From his first steps on Shadow Island in the cold winter night, Carnby is immediately confronted by terrifying, evil creatures that are determined to halt his progress. Throughout the course of Carnby's investigation, every step he takes, every corner he turns, he is met with suspense, intrigue and a sense of impending doom. Relying only on his instincts and limited resources, Carnby must destroy this sinister evil and uncover the truth. Who or what is hidden on this somber island? What invaluable secrets are buried beneath its depths? When will Carnby end this horrible nightmare?

Developed by Darkworks, the new Alone in the Dark will combine amazing technologically rich graphics with a deep, robust plot. Incredibly detailed backgrounds, high-resolution cinematics, intense lighting effects and eerily mysterious music and sound will bring this game to life.

Alone in the Dark will be available this fall at most major retail outlets. For up-to-date news, information and artwork on AITD visit <http://www.alone-inthedark.com>

UFO Interactive Infiltrates Sega Dreamcast Game
System with New Spy Role Playing Adventure
'Industrial-Spy Operation Espionage'

First Spy Role Playing Game for Sega Dreamcast

UFO Interactive is accepting a mission to publish a new video game for the Sega Dreamcast platform, "'Industrial-Spy Operation Espionage," scheduled for release April 2000. The game will be distributed in the United States by Tommo.

The first spy role playing game for the Dreamcast challenges players to scrupulously pit a team of the world's most agile agents against the world's fiercest forces in industrial espionage. The gamer's objective is to carry out the assignments of various top-secret clients ... some good, some evil, directing a team of talented spy agents. Each agent possesses special skills and talents, ranging from hacking computers to hypnotizing subjects.

"We are thrilled to be bringing gamers looking for a challenge, an adventure filled with hair-raising espionage exploits on one of the hottest, new game systems," said Nelson Kwok, chief executive officer of UFO Interactive. "What makes 'Industrial-Spy Operation Espionage' so exhilarating is that players must learn how to manage a team of diverse, talented and sometimes unpredictable agents in a series of deadly missions that take them all over the world."

Players first choose from eight intriguing agents: Boy Wonder "'Gabriel Ernest Archangel," The Acrobat "'Ling Ring-Hua," The Giant "'Gursyn Vlagimir," Female Bombshell "'Sarah 'Rocket' Luria," Jack of All Trades

'Jeffrey K. Saunders," The Hypnotist 'Kleopatra," The Chemical Maniac
'Charles Falloux" and The Team Leader 'Lemmy Evans."

Next, they must conduct preliminary investigations to gather information about their mission. Once players have all discovered all the data they need, they act as 'Boss," directing each agent on a number of assignments. But the player must be perceptive and be able to anticipate danger. The success of each mission depends on it.

'Industrial-Spy Operation Espionage" contains 10 challenging levels and an unprecedented amount of character interaction and team play. The more game savvy a gamer becomes in utilizing his team of eight spy members in a mission, the higher his scoring levels become.

'Industrial-Spy Operation Espionage," developed by Hunex, is memory card compatible and will be available for a suggested retail price of \$49.99.

Square Ships SaGa Frontier 2 for the PlayStation

Square Electronic Arts(SM) L.L.C. (Square Electronic Arts) Tuesday announced the release of SaGa Frontier 2 for the PlayStation game console.

The latest adventure role-playing game (RPG) from the makers of the FINAL FANTASY series allows players to play the game from start to finish as any one of several characters, increasing the replay value of the game. The new title also touts a multitude of weapons and a variety of magical powers.

The game is set in the 13th century against a lush backdrop of vibrant watercolor environments, where Gustave XII rules the kingdom of Finney. Characters in this land use a magical power called 'Anima" to conjure up spells, and when Gustave XII discovers that his son, Gustave XIII, doesn't have Anima powers, Gustave XIII and his mother are exiled from Finney.

Gustave XIII becomes the hero of those who do not possess the power of Anima, and he and his followers develop battle skills using machines and natural resources. Gustave XIII's nation becomes a threat to other nations including his homeland of Finney, resulting in a century-long conflict known as The Gustave War.

Unlike traditional role-playing games, SaGa Frontier 2 offers a multi-level scenario system where players select from two different scenarios to commence the game. One scenario follows Gustave XIII; a young prince who is forced into exile when he is found incapable of wielding a magical power called 'Anima."

The other scenario traces the life experiences of William Knights, a treasure hunter in search of the truth behind his parents' mortality. Although each scenario carries its own individual storyline, the outcome of one scenario opens up a multiple of different paths that will eventually effect the events in the second scenario.

With this unique system, SaGa Frontier 2 ultimately translates into more than 60 hours of thrilling interactive entertainment gameplay.

There are three distinct battle modes -- 'Duel", 'Team" and 'Strategic" -- which allow the player to tactically fight his or her way through the adventures. In the 'Duel" battle mode, the player chooses a

character to represent the entire team to engage in a battle against a representative from the enemy group.

The "Team" battle mode allows the player to use the collective power of the entire team to perform massive combo attacks in a turn-based style of combat. In the "Strategic" battle mode, the player commands and strategically maneuvers several units to fight in intense battles on a large battlefield.

Square has injected some fierce battle features into SaGa Frontier 2. For instance, a player will need to master detailed battle commands and learn how to swing his sword horizontally and vertically in order to conquer his enemy. Square has also enhanced the battle system by incorporating "Roles" and various Weapon and Spell Arts.

Specifically, a "Role" is a distinct task assigned to a character to accentuate their skills during battle. For example, a character with the role of "Getaway" can better the chance of the team ending a battle with a fierce monster by utilizing the character's negotiation skills.

Complementing this feature during battle are the Weapon and Spell Arts. Weapon Arts rely on the weapon used to perform physical attacks. There are six different weapons to choose from. Depending on the weapon used, the character can perform close range attacks such as slashing with a sword or distance attacks by launching an arrow using a bow.

Spell Arts, on the other hand, uses the "Anima" power that exists in various forms to create powerful attacks. A "Beast" Art, for example, uses the "Anima" that exists in beasts to create a massive attack called the "Howling Heaven." Ultimately, by utilizing these various battle features, battles are no longer just random attacks.

Players have the ability to execute hundreds of combination attacks at will, thus allowing more control during battle sequences.

SaGa Frontier 2 is compatible with the DUALSHOCK analog controller and is priced at (US)\$40. The game carries an ESRB rating of "T" (Teen).

Sega Sports NHL 2K for Sega Dreamcast Heats Up the Ice With Unprecedented Detail and Realism

In what is now their tradition of creating genre-defining sports titles, Sega Sports has set a new standard in hockey games with "Sega Sports NHL 2K" for the 128-bit, Internet-ready Sega Dreamcast videogame console. "Incorporating an unsurpassed level of detail throughout the game, "Sega Sports NHL 2K" shows reflections on both the glass and ice, there's powder spray as players pull up to shoot and fully animated crowds, coaches and skaters -- and that's just the tip of the iceberg. Gamers can embrace the true spirit of the sport with realistic physical actions and emotional reactions, as well as the detailed fight mode. "Sega Sports NHL 2K" also features authentic replicas of all NHL arenas, accurately modeled NHL players, professional play-by-play commentary and up to four-player support. "Sega Sports NHL 2K" is now available at retailers nationwide for \$49.95.

Developed by Black Box Games for Sega Sports, "Sega Sports NHL 2K" is brimming with innovative hockey game firsts. Featuring nearly 1,000 motion

captured moves with 100 different goalie animations, the result a wide array of realistic body checks, passes and fluid maneuvers. Other firsts include animated players' heads moving to follow the puck throughout the game, coaches yelling over a bad call and benches reacting to gameplay. With the jaw-dropping TV-evoking replay feature, players can zoom-in on facial expressions after a play. Instant replays show every detail from any angle -- gamers can even see the writing on the puck as it flies past the goalie and slams into the net!

"The goal with all Sega Sports' titles, including 'NHL 2K,' is to redefine the sports gaming experience. We've definitely achieved that goal with this game, thanks to the incredible detail and realistic gameplay," said Greg Thomas, vice president of product development, Sega of America. "'Sega Sports NHL 2K' doesn't compete or compare with other sports games. It competes with real-life TV broadcasts that's how far Sega Sports has elevated this genre on Sega Dreamcast."

In "'Sega Sports NHL 2K" authenticity is key. The game features all 28 teams, with every current NHL player competing in architecturally accurate arenas, with additional customizing options to update rosters with rookies, trades, or personalized players. Familiar details can be found everywhere in the game -- championship banners hang from rafters, ice spray flies off the players skates during a hard turn or stop and goalies play three different 'styles' according to their real life counterparts. Players appear with an assortment of gloves, sticks, skates, helmets, team specific pucks and heritage jerseys. Gamers, however, are able to select different jerseys, including old uniforms and those from teams that have moved.

The core of the realism in "'Sega Sports NHL 2K" is found in the actual players. The game features more than 900 unique player faces, each resembling their real life counterparts. Every player and coach has facial expressions, so when a player is not happy at being sent to the penalty box, gamers will know it! To ensure a life-like look, Sega Sports motion-captured real hockey players of various sizes and in full pads to accurately recreate their movements on ice. Each player is comprised of more than 1,400 polygons and individual 3D player models were used to differentiate NHL player positions. Gameplay also reflects true-to-life physics, as smaller players are less apt to make an impact by hitting the big guys and dodging a defender takes time to muscle past them.

Gameplay in "'Sega Sports NHL 2K" boasts highly advanced artificial intelligence. Players in the game will adjust their positioning and aggressiveness based on the coaching strategy that the user selects. Fluid movement in players is apparent as every shot, check and fall looks natural on the ice. Players who pass well in real-life excel at passing in this game and those who are good shooters from long-range will be deadly from the point. Shooting requires some serious aim and there are no "'money" plays. Players can also perform other actual on-ice moves such as wrist shots, slap shots, behind the goal dish passes, breakouts, cross checks and many more. The gameplay is as true to life as it gets.

Not only are the teams and gameplay accurately rendered, so is the atmosphere. Gamers will feel like they're at a real game, as animated crowds drink soda and cheer, while the digital coaches move about and react to gameplay. There are more than 16,000 unique sound files included in the game, from the buzzers down to the sounds of skates on ice. Playing "'Sega Sports NHL 2K" is similar to controlling an actual NHL broadcast. The play-by-play commentary by Hall of Famer Bob Cole and Color Commentary by ex-NHL coach Harry Neale cement the realism of the game. All these factors help make "'Sega Sports NHL 2K" an experience rather than just a videogame.

According to Glenn Horine, Group Director, NHLE, ``The NHL is pleased to add Sega Sports NHL 2K to our exciting line of fast-paced videogame products. NHL 2K sets a new benchmark for all action/simulation based games with their advanced technology and game features."

Adding to the replay value, ``Sega Sports NHL 2K" features a variety of playing modes. In Exhibition Mode, gamers can play with any two teams in the league including the two All-Star teams. Season Mode allows gamers to take their team through a full season, while tracking the player and team stats, complete with an All-Star game. For the truly competitive, the game features a fiery and heated Playoff mode.

Pushing the boundaries of innovative gameplay, ``Sega Sports NHL 2K" has an extensive Custom player feature. This allows gamers to create customized teams based on rosters, trading, line-ups or with imported information from a friend's Visual Memory Unit (VMU). Gamers can also create their own goalie or player with enhanced characteristics, creating an abnormally small or large team member.

``Sega Sports NHL 2K" is officially licensed by the National Hockey League and endorsed by Detroit Red Wings hockey great Brendan Shanahan, who is also a Sega Sports spokesperson. The game is now available at retailers nationwide and at www.sega.com.

Activision Takes Nintendo Gamers Into The Jungle

Swing into action as Activision, Inc., in collaboration with Disney Interactive, Inc., releases Disney's Tarzan on the Nintendo 64. Set deep in the African jungle, the 3D adventure game is available in North American retail outlets the week of February 14, 2000 and carries a suggested retail price of \$49.95. The game has been given an ``E" rating by the ESRB.

Based on Edgar Rice Burroughs' classic tale, Disney's Tarzan for the Nintendo 64 brings the animated feature film to life in a fun-filled, action-packed adventure. The game challenges players to adapt to the dangerous jungle surroundings by becoming stronger and more agile as Tarzan grows from childhood to adulthood. Gamers will also have the opportunity to play as Jane and Tarzan's ape friend, Terk, as the journey progresses.

Developed by Eurocom Developments Ltd., Disney's Tarzan features 13 levels, plus 12 bonus levels where players can swim with crocodiles, swing on vines and surf through trees to survive the perils of the jungle. As the immersive story unfolds, players encounter an angry leopard, an elephant stampede and a baboon attack as they attempt to save Tarzan's ape family from the evil hunter, Clayton.

Electronic Arts Announces SSX - Snowboard SuperX, Its First Entertainment Title for the PlayStation 2

Electronic Arts Thursday unveiled its first entertainment title developed exclusively for the PlayStation 2 game console. SSX/Snowboard SuperX -- centered on the unique and exciting new sport of boardercross will be on display at the Sony Festival in Japan on February 18-20 as SSX/Snowboard

SuperCross. Electronic Arts, the world's largest producer of interactive entertainment is the only North American publisher invited by Sony to show software at the festival.

Crisper, cleaner and a whole lot more fun, SSX and other EA titles developed specifically for Playstation 2 will set a new standard for interactive entertainment. Just a decade old, boardercross combines high-speed snowboard racing with the intense competition of a Supercross event on a demanding snow covered motocross track. The track includes jumps, steep turns, tunnels, and mogul piste sections that pit eight racers against each other.

To deliver the best PlayStation 2 experience, Electronic Arts grounded SSX in real snowboarding physics with a true-to-life feel and sense of control, but pumped it up for arcade fun. The artificial intelligence of SSX convincingly brings to life the experience of zooming down adventurous snow-covered way-over-the-top mountain tracks at break-neck speeds, pulling off mind-blowing aerial maneuvers while trying to dodge seven challengers.

The game features five distinct modes of gameplay. A sampling of the exciting action offered in SSX includes World Circuit -- a season-long dual against the world's top boarders. However to access this mode, riders must obtain a Circuit License, which earned by completing all the training lessons. From there rookies enter a field of 32 boarders featuring the world's best riders, and must run through a series of five different events. A high overall ranking following these events earn riders the big prize; entrance to the Professional World Championship Invitational Event. This event separates the best from the rest.

There is also an adventure mode in which a player must find and collect a multitude of 3D snowflakes placed in obvious and not so obvious parts of huge rideable areas. Additionally, the Show Off mode challenges players to practice their slickest tricks against some pretty stiff competition.

Players can choose to be one of eight distinct international boarder characters, each with his or her unique personality and skill set. Mac is the youngest rider at 15; Kaori has boundless energy and a sunny disposition; JP epitomizes the term 'style over substance'; Zoe is a street-savvy mountain biker who is making a name for herself in snowboarding; Moby is fearless and attacks courses like a buzz saw; Jurgen is know as 'the Giant' to his competitors; Elisa uses her good looks as a mask for her shrewd and dangerous mind; and Hiro, who wouldn't be caught without the latest and greatest in high tech racing gear.

In addition to the different game modes and characters to choose from, SSX also features over eight mind-boggling courses, each with its own quality and style. The Tokyo Megaplex features a pinball machine like course in which players must navigate their way through a barrage of moving ramps, opening and closing doors and even pinball flippers. Another called the Aloha Ice Jam is centered on an iceberg that has been towed into a tropical Pacific Ocean port for the explicit purpose of being ridden. Be careful though, one wrong turn and you could end up in the ocean, swimming for your life.

Sony Computer Entertainment will be hosting the Sony Festival this coming weekend in Tokyo to provide game enthusiasts their first hands-on preview to the PlayStation 2 console. The Sony Festival opens Friday, February 18 for press and distributors, and will then be open to the public on February 19 and 20. Sony expects to accommodate more than 50,000 visitors during the two public days of the festival.

The PlayStation 2 will go on sale in Japan in March 2000 with a fall launch in North America. SSX/Snowboard SuperX was developed at Electronic Arts Canada and will be available in North America soon after the PlayStation 2 launches in the U.S. and Canada.

Sega Unveils Digital Camera For Dreamcast

In a sign that gaming consoles are gaining momentum as PC alternatives, Sega today unveiled a new digital camera for its Dreamcast gaming system.

Sega's Dreamcast machine has been at the forefront of the market for Internet devices, as the console offers both gaming capabilities and Internet access. Sega has painted the machine as the centerpiece of its digital entertainment and home networking strategy.

With today's release of the digital camera, called the Dreameye, Sega is acting on its digital entertainment strategy.

Digital cameras may just be the tip of the iceberg. Dreamcast-like television-based Net appliances are already proving among the most popular ways for non-PC users to access the Web, according to a recent report from International Data Corp. Although many homes still don't have a PC, most have a television that can be used as an alternate medium to access the Net, analysts have said.

Although Sega reported strong sales of its console in the United States, the Dreamcast wasn't well received in Japan. Analysts have said that the company needs to expand its sales beyond its core "early adopter" market.

Analysts have also questioned Sega's staying power in the competitive gaming market. Sega's rivals--Sony and Nintendo--have also pushed similar strategies for their own gaming systems. Sony's Playstation 2, scheduled to be released in March, will act as a platform for everything from home shopping to banking to watching movies over the Internet, the company has said.

"Right now we're just getting started," said Kevin Hause, an analyst at IDC, referring to the market for Internet-connected gaming consoles, handheld devices, and other Internet appliances.

"The growth (of information appliances) will accelerate over the next couple of years, and will be one of the fastest growing categories around."

The market for Net devices, including TV set-top boxes, handheld computers and gaming consoles, is set to grow from 11 million units shipped in 1999 to 89 million units in 2004, according to studies.

The Dreameye, unveiled in Tokyo today, will use photo editing software developed by Picture IQ. Using the Dreameye, Dreamcast users will be able to capture digital images and edit them using the software. Users can also send pictures to friends or family via the Internet.

"Sega is committed to providing people with the power to do more with the Dreamcast system," said Kideki Sato, corporate senior vice president at Sega, in a statement. "We want people to have more fun through the

network, be more creative and communicate with more people."

ReleaseNow.com and The 3DO Company Partner to Launch
'3DO Pipeline,' An Internet Site for Game Enthusiasts

ReleaseNow.com, a provider of outsourced e-commerce solutions, and The 3DO Company, Tuesday announced that The 3DO Company's catalog games and Internet-only games are now available for purchase and immediate download from a new Web site called 3DO Pipeline
(<http://store.3do.com/pipeline/index.html>).

3DO Pipeline is launching with six games, including Arcomage, a fast-paced fantasy card game, and the classic games in the best-selling Might and Magicfi role-playing series. 3DO Pipeline is seamlessly integrated with The 3DO Company's online store at [www.3DO.com](http://www.3do.com). Customers may purchase games and download them directly to their computers.

As The 3DO Company's e-commerce partner, ReleaseNow.com developed and is hosting and managing 3DO Pipeline. In addition, ReleaseNow.com is providing targeted integrated e-marketing services to The 3DO Company to publicize the launch of the site to gaming enthusiasts.

"Our customers are tech-savvy by nature and enjoy the immediate gratification provided by digital downloads," said Trip Hawkins, chairman and chief executive officer of The 3DO Company. "Offering our most popular games directly from our Web site was a no-brainer decision. ReleaseNow.com made it easy for us to do this quickly and reliably."

Hawkins added: "We expect our library of direct download games to expand as more consumers get faster access to the Internet."

"We are pleased to be working with The 3DO Company to market, sell and deliver their products online. Their targeted e-marketing efforts will provide a superior customer experience," said Michael Maulick, chief executive officer and president, ReleaseNow.com. "The 3DO Company has long been an innovator in the industry and continues to be on the leading edge with its e-commerce strategy."

Games available now for immediate purchase and download include:

- * Might and Magic: The Secret of the Inner Sanctum
- * Might and Magic II: Gates to Another World
- * Might and Magic III: Isles of Terra
- * Might and Magic IV: Clouds of Xeen
- * Might and Magic V: Darkside of Xeen
- * Arcomage

The Might and Magic series, developed by New World Computing, is one of the most long-running, successful electronic gaming franchises in history. Its creator, Jon Van Caneghem, programmed and sold the first game out of his apartment in 1986. Since then, the series has branched out beyond its classic role-playing roots into strategy and action genres and has garnered numerous awards. To date, there have been well over 4 million units sold worldwide in the Might and Magic universe, and the series has been translated into more than 12 languages.

Arcomage is a fast-paced, single- or two-player fantasy card game in which

players strive to crush their opponents using magic, creatures and building resources.

Striving to Build a Better Computer Game

They can take you to worlds beyond your imagination. They can spark an adrenaline rush. They can keep you transfixed for hours.

But at last week's conference on "Computer and Video Games Come of Age" at the Massachusetts Institute of Technology, game designers acknowledged that they still have a long way to go to make computer games as compelling and realistic as a good book or movie.

That may explain why the games continue to occupy a niche -- albeit, a rapidly growing niche -- in the entertainment field. Speakers at the seminar on The Future of Games suggested that the technology and the programming skills are going to have to evolve before the games become a mature, mass-market medium.

"You have to make games so accessible, people will go home and ask, 'Shall I watch a video, watch cable, or play a computer game?'" said Peter Molyneux of Lionhead Studios, who helped create the "God game" genre with the release of "Populous" a decade ago.

"There have to be games invented that simply don't exist today," he said. "They have to entertain people, not just hobbyists and dedicated gamers. To do that, you've got to make games incredibly, incredibly deep. You've got to use the technology better."

Some interesting technological improvements are on the horizon.

One is designed to overcome the seemingly endless configurations of video cards and processors. "We are limited in our game design because we don't know which computer the game is going to be played on," said David Perry, founder of Shiny Entertainment. The answer may be scalable technology, where the game constantly monitors the performance of a player's computer.

"When it sees your machine starting to choke, it eases back on the pressure it's putting on your hardware by removing polygons on the scene that you're not going to notice," Perry explained. "We know that your machine is going to run at 100 percent of its potential 100 percent of the time."

In fact, players with top-of-the-line machines "will see visuals in the game that we, the developers, never saw."

Another potential innovation is to create games that alter themselves based on the wishes of the player.

"The games should be personal," Molyneux said. "Why should a computer game be the same for everybody? Why shouldn't a game be able to look at the person who is playing it and change itself to cater to that one single person?"

That potential already exists, said Perry. "The programmer can see you through his machine, the programmer can tell if you're frustrated because you're pushing the keys rapidly, trying to open a door. We know if you

keep walking around the room that you may be lost, so we can keep an eye on you a bit longer and then we'll give you some help," if you need it.

Mark Pesce of the University of Southern California said the trend toward multi-player games will grow even stronger. "It adds so much life to a game when, after you've had the initial experience, to go play your friend."

Personally, Pesce said, he's bored by contemporary multi-player games because they don't take advantage of a program's artificial intelligence. "The characters are just standing around waiting to be executed. Players happily execute thousands of them. They go room to room to room. But it's not a compelling world to get into."

That could change, he said, if individual computers involved in a multi-player game could be taught to share the software's processing tasks. "And the more people you add, the more processing power you can add" to increase the realism.

Perry said another problem is that the artificial intelligence that drives today's games isn't all that intelligent.

"In 90 percent of the video games, the AI is pretty bad," he commented. "I think that's why it's fun to shoot things. The AI is so bad and the characters are so annoying."

Even with the growing sophistication of games, humans are not simulated well. In real life, for example, people nod at each other when they meet. "In video games, characters don't nod. Instead, they walk into walls" or refuse to duck for low-hanging beams, trying to walk anyway, said Perry.

Molyneux described one example that cropped up when he and his colleagues began developing "Black & White," a game where you play a deity who, among other things, controls a loyal pet known as "the creature."

"The first thing we got the creature to learn was to think about what to eat," Molyneux recalled. "The first time we got him visually up, he was standing there looking down at himself and just reaching down. We couldn't understand what he was doing."

"Then we debugged him and, sure enough, he was looking around for something to eat and the most tasty thing he could find to eat was his own leg," said Molyneux. "So we had to give him the rule: you can eat anything but don't eat yourself."

That illustrates the challenge of creating virtual humans, said Perry. "To teach them to interact with the real world and not eat their leg, you have to physically teach them common sense. The problem is, when we make a video game we only fix what we see. So if we see the character eat his leg, we put in something that says 'Don't eat your leg.' That's common sense. But basic common sense has millions of parameters. It's going to be a long time before you really believe this thing is alive."

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For Immediate Release

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CLASSIC GAMING EXPO 2000 SHOW DATES ANNOUNCED;
"FATHER OF VIDEOGAMES" FIRST TO SIGN ON

VALLEY STREAM, NY (February 15, 2000) -- The organizers of Classic Gaming Expo have announced the dates of the 2000 show to take place at Jackie Gaughan's Plaza Hotel. On Saturday, July 29, and Sunday, July 30, the computer and gaming industry's most innovative pioneers will gather in Las Vegas to attend Classic Gaming Expo 2000. Dubbed CGE2K, the third annual event is inspired by a strong, continued commitment to classic game updates and re-releases by such major publishers as Hasbro, Midway, Activision, Konami, Capcom, and others.

Heading up this years line-up of industry pioneers is none other than the "Father of Videogames" himself, Ralph Baer. "Mr. Baer was one of THE major highlights at last year's event and we're thrilled that he has decided to join us again for CGE 2000," said Sean Kelly, co-promoter of Classic Gaming Expo.

Last year, Baer thrilled audiences by allowing some members to play with his prototype "Brown Box", which eventually became the Magnavox Odyssey. In addition to the Odyssey, Baer was the mastermind behind the Coleco Telstar Arcade and Gemini systems, Milton Bradley's Simon, and the Coleco Kid Vid peripheral for the Atari 2600. Mr. Baer has created many other products and currently has over 150 patents in his name worldwide.

"I'm proud to have had a hand in shaping the videogame hobby as we know it today," said Mr. Baer. "It was a thrill to meet so many of the attendees at last year's show as well as some of my old friends. I'm looking forward to the opportunity to share more of my experiences and to again show the 'Brown Box' prototype at CGE 2000."

The "Brown Box" prototype is just one of the technological wonders that will be on display at CGE 2000. Aside from the keynote speeches by various industry legends, Classic Gaming Expo also hosts the largest public display of classic game hardware, software, and memorabilia around. Some of the countless items to be displayed at the CGE 2000 museum include numerous hardware and software prototypes as well as many unreleased items and loads of videogame memorabilia. "What makes the Classic Gaming Expo Museum so special is the fact that it's comprised of items belonging to at least two dozen different individuals," stated co-promoter John Hardie. "This is not just a single person's collection but rather a grouping of items on loan from enthusiasts as well as many of our distinguished guests."

Among the other activities planned, CGE 2000 will play host to a large number of classic videogame vendors and exhibitors. While many of them will be selling mint-condition hardware and software from the days of old, others will be presenting new products for sale for systems such as the

Vectrex, Odyssey 2, Colecovision, Intellivision, Atari 2600, Lynx, and Jaguar.

Other show highlights include various classic console game stations, tournaments, raffles, door prizes, and an incredible number of classic coin-operated videogames, all set on free play for the attendees.

"I'm delighted to see the growing commitment from the major videogame publishers to this market segment. It is becoming clear that classic gaming is a pastime enjoyed by more and more people," points out Mr. Donald A. Thomas, Jr., Curator of ICWhen.com. Thomas worked as Atari's Consumer Services Marketing Director in its later years. He currently works as a licensing director in the high-tech industry.

Now in its third year, Classic Gaming Expo remains the industry's only annual event that is dedicated to celebrating the roots of electronic entertainment; bringing together industry pioneers, gaming enthusiasts, and the media for the ultimate experience in learning, game-playing and networking. Classic Gaming Expo is a production of CGE Services, Corp. (www.cgexpo.com)

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A-ONE's Headline News
The Latest in Computer Technology News
Compiled by: Dana P. Jacobson

Links in Computer Attacks Traced

Experts investigating recent attacks against major commercial Web sites say a computer and an Internet device used by vandals as weapons have been traced to two California universities.

The vandals used a desktop computer at the University of California, Santa Barbara, and an Internet router - a device that can amplify data traffic - from Stanford University, officials at both schools acknowledged Friday.

There was no indication that anyone at either university was directly involved, only that their equipment was used. Experts believe dozens of computers nationwide were hacked and had electronic attack software secretly installed.

"They've attacked us in a way that hurts what we do as a university, and hurts all universities," said Robert Sugar, chairman of the information technology board in Santa Barbara. The school's computer was believed used in the attack against CNN's Web site Tuesday.

Stanford said one of its routers located at a remote wildlife preserve was used to transmit some of the data aimed against the Web site of auction operator eBay for about 30 minutes before engineers blocked hackers from using it.

"It's really out in the middle of nowhere," said Dave Brumley, assistant

computer security officer at the university. He said engineers have checked Stanford's other routers to prevent their similar misuse.

Meanwhile, investigators suggested that the vandals in Monday's attack against the Yahoo! Web site - the first to be shut down for hours - may have been far more sophisticated than originally believed.

Ronald Dick, a senior official with the FBI's National Infrastructure Protection Center, said earlier this week that automated hacker tools widely available on the Internet mean that "a 15-year-old kid could launch these attacks."

"This is not something that it takes a great deal of sophistication to do," Dick said.

But e-mail from engineers for search engine Yahoo! describing the attack in detail said the vandals apparently "knew about our topology and planned this large-scale attack in advance," and that other companies hit this week also were targeted "where it hurts the most."

This e-mail, sent as a warning to some Internet providers and obtained by The Associated Press, also described the Yahoo! attackers as "smart and above your average script-kiddie," a derisive term for an unskilled hacker. It said the vandals "probably know both Unix and networking ... pretty well and learn about site topology to find weak spots."

An executive at GlobalCenter Inc., which provides Yahoo!'s Internet connection, also said Friday that engineers there were surprised during the attack, which flooded Yahoo! with more data each second than some major Web sites receive under normal conditions in a week.

"About an hour into the initial attack, they were already commenting about what appeared to be some level of sophistication," said Laurie Priddy, the company's executive vice president. "These (vandals) seemed pretty smart who were doing it."

"Denial of service tools are widely available and do not require great sophistication to use," said a federal law enforcement official who requested anonymity. "But what we've seen already does seem to be a somewhat sophisticated attack."

At the White House, President Clinton said the Internet offers new opportunities for people "just mischievous and people who have far darker motives." But he also held out hope that America will "develop better defenses and better defenders."

"If you go back from the beginning of time, where things of value are stored, people with bad motives will try to get to those things," Clinton said. "Now vast things of values are stored in our computers and transactions of great values occur on the Internet."

Also Friday, Excite.Com - a popular search engine for the Web - said its site also was targeted earlier this week by attackers. A flood of data disrupted service for about half its customers for about one hour Wednesday night until the attack suddenly ended without warning, spokeswoman Kelly Distefano said.

In these attacks, called "distributed denials of service," hackers secretly install software tools on dozens or hundreds of powerful but insecure computers - usually those of corporations or universities - then

remotely direct crippling floods of electronic data at target Web sites.

FBI's Internet Cases Quadruple

The number of newly opened FBI computer investigations has quadrupled since the first electronic commerce sites were attacked last week. Investigators theorize copycats may have emerged to attack additional, but less well-known Internet sites.

Attacks have continued into this week, and no one knows if they have ended, FBI spokeswoman Debbie Weierman said Thursday.

Two days after the first attack overwhelmed Yahoo! on Feb. 7, the FBI had opened four new investigations of these so-called distributed denial of service attacks. Now the total is "more than 17 new investigations, including more than 13 where the victim suffered a distributed denial of service attack," Weierman said Thursday. Only eight of the more than 13 have been publicly identified.

Four investigations are into the placing of denial of service tools, known as daemons, on middleman computers that can later be remotely ordered to attack a victim site, Weierman said. Hiding these daemons on unwitting host computers is a key step in mounting a distributed denial of service attack.

"The possibility of copycats is out there, as are other theories, with these piggyback incidents," she said.

At first, the coincidence of timing suggested the attacks were launched by the same people. As the attacks continued, investigators began actively looking into the copycat theory, according to other federal law enforcement officials, who requested anonymity.

Investigators won't reveal the patterns they have found in the logs of target and middleman computers that lead them to suspect some copycats are at work since such large, frequently-used electronic commerce sites like eBay and Amazon.com were attacked last week. But one factor that contributes to the theory is the use of more than one type of tool to mount the attacks.

Without saying where or when they have been employed, FBI Director Louis Freeh has identified three such tools: TFN for Tribal Flood Net, trinoo and stracer draht. Some can be downloaded free from Internet sites.

The coordinated denial of service attacks are known to have overwhelmed eight Web sites - those run by Yahoo!, eBay, Amazon.com, CNN, ZDNet, Buy.Com, ETrade and Excite.

There are more than five other victims whose identities are not public. And those whose attacks were not noticed by large portions of the public.

The FBI opens an investigation after a victim complains and bureau agents find some evidence of crime in a preliminary analysis. Weierman said the bureau would not disclose the identities of all the victims "to preserve the integrity of the investigation."

Other federal law enforcement officials said some victims companies want

their names withheld to protect their reputations or for fear of losing the confidence of the public or seeing their stock price drop.

The Feb. 7 attack on Yahoo! was acknowledged by the company hours later - after reporters inquired whether the site had been brought down by attacks. Many of the other victim Web sites were originally identified as suffering attacks by Keynote Systems Inc., which monitors the performance of major e-commerce sites. Excite, which was hit the night of Feb. 9, didn't disclose it until Feb. 11.

Investigators say that dozens, even hundreds, of middlemen computers, known as zombie computers, have been unwittingly used in past distributed denial of service attacks. So far, only three are known to have been used in the current round of attacks, a computer at the University of California at Santa Barbara, a router at Stanford University and a home business computer in the Portland, Ore., area.

Attorney General Janet Reno said Thursday that ``to date, there has been such good cooperation between the private sector, other federal agencies and the FBI. And I am very pleased with that."

Hacker Victims or Accomplices?

The overwhelming attacks this week against some of the Internet's biggest companies required dozens of powerful ``zombie" computers collectively aiming a crippling tide of data at target Web sites.

Experts believe the hackers earlier had infiltrated and secretly installed their attack software on these computers, setting them up as unwitting accomplices in a crime-in-the-making.

Were the operators of these computers merely victims of these unprecedented assaults, or were they partly to blame?

It's a question with enormous consequences for the Internet, the sprawling worldwide network that has few rules and where security can range from ironclad to nonexistent. As the Internet's importance grows as an engine for America's economy, some experts wonder whether unsafe computers can continue to be tolerated, or whether there is any alternative.

``There are a lot of devices out there that are misconfigured, wide open, totally available to anyone who wants to use them," said Russ Cooper, who runs the NTBugtraq Internet discussion group about computer security. ``That's very, very true and it shouldn't be. Why do we accept this?"

The FBI suggested this week that owners of the hacked computers used in the high-profile attacks may indirectly share some of the responsibility for the moves against Web sites run by Yahoo!, eBay, Amazon and eTrade.

``Even more embarrassing than for Yahoo! and eBay is when we find out where these attacks originated from," said Wyatt Starnes, chief executive at Tripwire Inc., an Internet security firm.

A senior official at the FBI's National Infrastructure Protection Center, Ronald Dick, said the affected computer administrators ``probably are unwitting people" whose systems previously were invaded by hackers and who didn't know that attack tools had been installed. Agents still are

tracing those hacked computers and won't identify them.

But Dick chided: "Your security ... or the lack thereof can cause harm to others. The key to this is implementing appropriate security measures such that you do not allow your system to be used in some of these attacks."

The popular shopping Web site Buy.Com was among those attacked this week, shut down for hours by a flood of data from these compromised computers. Its chief executive, Greg Hawkins, said he doesn't directly blame operators who failed to secure their own machines against hackers but added, "we all have a responsibility."

The technology officer at one Internet security company, Mike Wittig of CyberGuard Corp., compared running an unsecure computer on the Internet to carelessly storing a loaded gun.

A hacked computer can be used to bring down other Web sites, transmit unwanted e-mail to tens of thousands of people and even cover a hacker's digital footprints committing other electronic crimes.

Computer operators "have a tremendous responsibility in ensuring they're not used to do any harm," Wittig said. "There definitely should be a moral responsibility to prevent your site from being utilized in such an attack."

Experts believe most of the hacked computers used in this week's attacks likely were run by companies or universities, and Buy.Com said its attack was traced to computers in Boston, New York and Chicago. Those machines - rather than a consumer's home computer with a dial-up Internet account - are much more attractive to attackers because of their high-speed connections.

"If you're going to flood someone, it's easier to hit them with 50 fire hoses than garden hoses," said Patrick Taylor, an executive with Internet Security Systems Inc.

Reasons for light security vary. A computer at Oregon State University was hacked in November and illicitly used again in December by the hacker who claimed to have stolen 300,000 credit card numbers from the CD Universe Web site. There is no evidence that computer was used in this week's attacks against Yahoo!, eBay, Amazon and others.

The Oregon State computer, kept locked in a closet in the school's Department of Bioresource Engineering, was never made fully secure, partly because it didn't contain any information deemed sensitive, said John Bolte, who runs the department's biosystems analysis group.

Other experts insist no one should be held responsible for an attack against an organization's Web site - except the hackers.

"At the end of the day, it's still ultimately your responsibility to protect your property," said Harris Miller, president of the Information Technology Association of America. "You can't blame someone else."

Others disagree, predicting a bevy of lawsuits.

"It's really no different than if you left dangerous materials around and somebody used it to hurt somebody else," said Geoff Allen, who runs Willis Media, an insurance and risk-consulting firm. "You'll see claims

start to go at some point, possibly see suits against these servers that had been compromised.

''The question is, did the owner of the server take adequate precautions."

Secret Microsoft Negotiations Suffer From Leak

A published report said Wednesday that Microsoft Corp. is prepared to make concessions to achieve a settlement in its antitrust case, although the mediator had warned both sides against leaking to the press.

The negotiations before an appellate court judge in Chicago, acting in a private capacity, are running on a parallel track with the trial itself.

Early on in the negotiations, Appellate Judge Richard Posner told both sides in the strongest possible terms not to speak to the press about the talks.

Nonetheless, there was one earlier leak, which gave a broad -- and apparently somewhat erroneous -- outline of the government's position. Commentators said at the time the leak had hurt the talks.

The trial itself resumes on Tuesday in Washington with arguments before District Judge Thomas Penfield Jackson on whether Microsoft broke the nation's antitrust laws.

Jackson has already found that Microsoft abused monopoly power to the detriment of consumers, rivals and other companies.

The trial has been in recess since before the negotiations began in Chicago late last year before Posner.

Posner warned both sides against talking with the press. The first exposition of Microsoft's stance in the talks appeared in a piece in Wednesday's Wall Street Journal.

The report said that Microsoft ''initially argued it hadn't violated the law ... But more recently, it put on the table a series of conduct restrictions..." The report cited people close to the case.

Microsoft was willing to agree to greater disclosure of the inner workings of Windows, an end to restrictive contracts and measures to give personal computer makers more freedom, the story said.

At the same time, the story characterized the government's stance as insisting on more stringent measures, including a proposal to break the firm into two companies, one for consumers and another for businesses.

A government official said Microsoft had leaked the information.

''It is most unfortunate that Microsoft is violating the confidentiality of the mediation process," the official said, when asked about the story.

A Microsoft spokesman denied that his firm had leaked the information, even though it cast his company in a favorable light for a willingness to make concessions.

'We have not talked about mediation," the spokesman said. "We're not going to comment."

In the past few days, Microsoft has also sent an e-mail to a broad array of House and Senate members declaring its intent to seek a "common sense settlement" to the case.

Without describing what such a settlement might entail, Microsoft said in the e-mail that it was "concerned -- even dismayed -- that the Department of Justice, according to several press reports, is insisting on breaking up the company."

Several members of Congress, after receiving inquiries, endorsed the negotiations.

For example, Senate Minority Leader Tom Daschle, a South Dakota Democrat, said that the "current mediation process provides both parties a unique opportunity to resolve this dispute..."

It is unclear how long the talks may last. Judge Posner made it clear he does not want the talks to go on forever.

Judge Jackson, in describing Posner's views when he announced the negotiations said: "I don't think that he is going to be prepared to waste a whole lot of time if it looks from the outset" that the talks would not be promising.

DoubleClick Faces New Legal Action

DoubleClick Inc., the leading online advertising firm that has become a lightning rod for fears about privacy on the Web, came under a new legal attack on Thursday, sending its shares falling 15 percent.

The Michigan attorney general's office said it began legal proceedings on Thursday against the New York-based firm, which collects increasingly personal data on Internet users, and then sends advertising targeted to the user.

Shares in DoubleClick closed down 15-3/4 to 90-3/4 on Thursday, making it one of the top losers on Nasdaq.

The company is also facing five other similar lawsuits as well as government inquiries out of Washington and New York.

The company filed an annual report with the Securities and Exchange Commission on Thursday, saying it would need to expend significant resources due to the lawsuits and inquiries.

"We may need to spend significant amounts on our legal defense," the company said. "Senior management may be required to divert their attention from other portions of our business, new product launches may be deferred or canceled as a result of these proceedings."

DoubleClick has amassed 80 to 100 million detailed individual profiles, according to the Michigan attorney general. DoubleClick delivered about 30 billion ads in December 1999 alone, through alliance with 1800 of the most prominent Web publishers and over 11,000 sites worldwide.

The company, which is the subject of five other similar lawsuits, defended its policies on Thursday, saying it does not use "sensitive" personal details in the background data it compiles on Web surfers.

"DoubleClick has never and will never use sensitive online data in our profiles," said Kevin Ryan, president of DoubleClick.

Sensitive information would include information related to health, finance, children or sexually explicit data, according to DoubleClick Washington lobbyist Josh Isay.

"We don't use information if you go to a children's site, and DoubleClick doesn't use personal information from children," he said.

Isay acknowledged that a child surfing other sites would be subject to anonymous data collection since there is no way to distinguish a user's age.

DoubleClick profiles include information about Web sites visited; for how long; user's language; and what Web browser they use.

This information was anonymous until recent months, when the company began to set up partnerships with certain Web sites that ask users for their names, addresses and e-mail addresses.

In November, DoubleClick bought Abacus Direct, a direct marketing research firm, giving it access to a large database of offline customer information.

Privacy advocates are alarmed at the prospect of a database formed from its online tracking, offline data about buying habits and volunteered user information.

DoubleClick has asserted that it only collects Web data if individuals are informed of its efforts and volunteer their identities.

"It is DoubleClick's policy to only merge personally identifiable information with non-personally identifiable information for profiling, after providing clear notice and choice," said Ryan.

DoubleClick maintains that anyone can opt out of the tracking system, but privacy advocates said more of the burden should be on the company. They said tracking should only be permitted after someone explicitly agrees first.

"I think we've gotten to the point now it is getting too difficult for consumers to discern," said Gary Clayton, president of Privacy Council, a Dallas-based privacy consultancy. "I think there needs to be a default that the information isn't used unless a consumer opts in."

The Federal Trade Commission's Bureau of Consumer Protection late on Wednesday said it has initiated a routine inquiry to determine if DoubleClick has engaged in unfair or deceptive practices in violation of the Federal Trade Commission Act.

The New York Attorney General's office is also conducting an informal inquiry into DoubleClick.

DoubleClick has said it is cooperating with the FTC probe and the N.Y. inquiry.

Analysts downplayed any long-term threat to DoubleClick's business, pointing out that traditional marketers buy and sell personal data constantly.

"The issue at hand is whether to have an opt-in, or an opt-out policy," said Janney Montgomery Scott Inc. analyst Tomas Isakowitz. "The privacy advocates are asking for an opt-in policy, and if that happens it would have a negative impact on DoubleClick and a lot of other Internet companies."

"But I don't see that happening in the U.S.," he said. "We are a marketing society."

CS First Boston analyst Richard Peterson said the odds were small that the company would be stopped from connecting the Abacus database to its online information.

"If they cannot connect their offline and online data, then they cannot make as much use of Abacus data they saw initially, and that takes 20 percent of their business," he said. "But given the very small, maybe one percent, chance of this happening, the drop in share price is a big overreaction, and a buying opportunity for the long term."

Networks, Studios Fight Net Pirating

Heavyweights in the entertainment and sports industries brought their power to bear against a Canadian Internet startup site, winning the first rounds and shutting it down. But the fight isn't over yet.

Ten motion picture studios, four TV networks, the NFL and the NBA banded together to get an injunction last week keeping iCraveTV from rebroadcasting their shows into America. It remains to be seen if that will stop other Web sites from going ahead.

"iCraveTV was the hole in the dike," said Michael Shamos, who worked with the plaintiffs and is co-director of the Institute for eCommerce at Carnegie Mellon. "Pirating will become a bigger business." That prediction has industry leaders worried they could lose control over copyrighted materials, potentially cheapening them - and compromising the deals they make with advertisers and local stations.

Somebody Call An Exterminator!

Can Microsoft squash 63,000 bugs in Windows 2000?

Not everyone will be having fun at Microsoft this week. While the software giant and its partners celebrate the arrival of Windows 2000 on Feb. 17, hundreds of members of the Windows development team will be busy cleaning up the mess.

Not the launch-party mess. The code mess. According to an internal Microsoft memo viewed by Smart Reseller, the company needs to fix tens of thousands of bugs contained in the final Win2000 release code. Fixing

these bugs is the top-priority assignment for Microsoft group VP Jim Allchin's Windows team.

"Our customers do not want us to sell them products with over 63,000 potential known defects. They want these defects corrected," stated one of Microsoft's Windows development leaders, Marc Lucovsky, in the memo. "How many of you would spend \$500 on a piece of software with over 63,000 potential known defects?"

It's a question that solutions providers will surely weigh as they kick Win2000's tires.

According to the Microsoft memo, the Windows 2000 source-code base contains:

- * More than 21,000 "postponed" bugs, an indeterminate number of which Microsoft is characterizing as "real problems." Others are requests for new functionality, and others "plain confusion as to how something is supposed to work."
- * More than 27,000 "BugBug" comments. These are usually notes to developers to make something work better or more efficiently. According to Microsoft, they tend to represent "unfinished work" or "long-forgotten problems."
- * Overall, there are more than 65,000 "potential issues" that could emerge as problems, as discovered by Microsoft's Prefix tool. Microsoft is estimating that 28,000 of these are likely to be "real" problems.

"Our goal for the next release of Windows 2000 is to have zero bugs. The only way this happens is if you take it upon yourselves to fix the bugs that should be fixed, and close the bugs that should be closed," continued Lucovsky in his note to the development team.

He added that no new code for future Windows releases, such as Whistler and Blackcomb, will be allowed to be "checked in" until the development team has fixed the existing Windows 2000 bugs.

A spokeswoman for Microsoft strongly defends Windows 2000's quality. She says: "Bugs are inherent in computer science. All software ships with issues. The difference is, no software in the history of Microsoft development has ever been through the incredible, rigorous internal and external testing that Windows 2000 has been through."

The spokeswoman notes that 750,000 testers received each beta version of Windows 2000. She says "hundreds of companies have signed off on the incredibly high quality and reliability of Windows 2000."

The result, she says, is that hundreds of companies are deploying Windows 2000 before general availability.

One developer, informed of Microsoft's bug estimates, says that all new software ships with lots of bugs, but that few software vendors are willing to acknowledge this reality. "The fact that Microsoft found that many bugs indicates to me just how thorough their testing processes are,"

says the Windows developer, who requested anonymity.

But others aren't so sure. Market researchers have repeated warnings to their clients against upgrading immediately to Win2000. Several outfits have advised customers to wait until Microsoft issues its first or second service pack before deploying Win2000. And research outfits made these suggestions before the exact bug tallies came to light.

Despite these bugs, Microsoft has made Windows 2000's reliability a key focus and part of its marketing message for the product for months. At COMDEX/Fall last year, Allchin detailed at length the two-year-old reliability initiative upon which Microsoft had embarked to insure Win2000 would be more stable and reliable than NT 4.0 or its predecessors.

Allchin said Microsoft spent 500 person years and \$162 million on people and tools specifically oriented toward improving reliability of the product.

In more recent weeks, Microsoft has plastered ads on buses, billboards and phone booths in a number of major cities. "Windows 2000 is coming. Online or off, a standard in reliability," reads the text.

Windows 2000 is hardly Microsoft's only worry in the coming months. Another big hurdle is application support for the operating system.

Microsoft's been working on a slew of Windows 2000/Active Directory-optimized applications, which ultimately will ship as some type of BackOffice 2000 or BackOffice 5.0 package.

The first BackOffice 2000 beta isn't expected until some time in the second half of this year. But the first BackOffice 2000 app upgrade, Exchange 2000, is expected to arrive around midyear. Other BackOffice Server updates--the next releases of SQL Server, Proxy Server, SNA Server and Systems Management Server--also are in the development pipeline. But exactly how far along they are is unclear.

At the same time, Microsoft is developing several BackOffice add-ons. Microsoft preannounced some of these add-ons, such as its BizTalk Server, Commerce Server and AppCenter Server, a full year ago. But first betas of these point products have yet to appear.

The company doesn't plan to move any of these new point products into the BackOffice SKU, says Russ Stockdale, director of server applications marketing with Microsoft's Business Productivity Group.

Stockdale says Microsoft's plan is to continue to offer current and future BackOffice SKUs to branch-office customers and midsize organizations.

Stockdale acknowledges that BackOffice 2000 will have little appeal to e-commerce and dot-com customers--even though Microsoft is pitching its anchor, Windows 2000, as an e-commerce-optimized operating system.

Microsoft Launches 2000 With Help From Dell

Software giant Microsoft Corp. on Tuesday kicked off a gala launch event

for Windows 2000, with a key ally, Dell Computer Corp. and corporate customers giving the new operating system high marks.

Delivering the opening keynote for the three-day event, which will culminate on Thursday with the official unveiling of Windows 2000 by Microsoft Chairman Bill Gates, Dell Chief Executive Michael Dell said he thought adoption of the software would be "strong."

His comments came in response to worries by analysts and investors that customers might be slow to upgrade to Windows 2000, to be launched Thursday. The next-generation operating system will run business networks and the powerful servers that underpin the Internet.

"I believe the adoption rate will be strong," Dell told a news briefing after his speech. "We see a lot of interest in Windows 2000, and our Dell technical consulting practice has seen a lot demand."

Microsoft has bet \$1 billion and more than three years of effort that Windows 2000, the successor to its NT networking platform, will allow it to capture the lion's share of the booming market for servers and business computers.

But the Redmond, Wash.-based software giant has faced increasing competition from rivals such as the upstart Linux operating system and perennial foe Sun Microsystems Inc.

The company's stock has been rocked the past few days, including a 5 percent-drop last Friday, after a report by research firm The Gartner Group forecast Windows 2000 adoption would be slow and that companies switching to it this year would experience compatibility problems with existing software.

Comments by Dell last week that Linux was gaining strength and that he didn't see "a massive, immediate acceleration" in business driven by Windows 2000 upgrades, also rattled investors.

Dell on Tuesday distanced himself from those words, saying the remarks were inappropriately linked to the Gartner report. Other analysts have since said that a slower roll-out for Windows 2000 was expected because of the cost and effort needed to upgrade sprawling business networks.

Dell said his company, the No. 1 direct seller of personal computers that relies heavily on the Internet, had flipped the switch and jumped to a Windows 2000-based system last Wednesday.

He touted the reliability and flexibility of Windows 2000, the release of which Microsoft had repeatedly delayed as it continually massaged the software's more than 30 million lines of code.

"This is a huge and very important leap forward in terms of what customers want from their PCs and the related products that go around it," Dell said.

Dell also took a shot at rival Sun, saying a Dell-brand server powered by Intel Corp.'s Pentium III chips and running Windows 2000 offered twice the performance, took up half the space and was one-third the price of a comparable Sun system.

Sun is one of Microsoft's most vocal critics, and has pushed its Java and Jini programming technologies as open and Internet-friendly alternatives to

Windows systems.

Sun Chief Executive Scott McNealy has publicly called on the industry not to support Windows 2000, saying it is too bulky and clunky to be of practical value in a world that is moving toward ``anywhere, anytime" computing on a range of non-PC devices.

But Dell said his company was working with such high-profile customers as Wall Street brokerage firm Merrill Lynch, American Express, TWA airlines and leading job Web site Monster.com to deploy Windows 2000.

Ford Motor Co. also gave the platform a thumbs-up, with its Chief Information Officer Jim Yost saying the American car giant planned to complete a total Windows 2000 make-over by early 2001.

``Windows 2000 was chosen for both its scalability and reliability, which are needed to support our high-volume needs," Yost said. ``We need to have a very robust infrastructure."

Dell's keynote was to be followed by one from Michael Capellas, chief executive of Compaq Computer Corp., the world's second biggest computer company, later on Tuesday.

Apple Unveils Souped-Up Notebook

Apple Computer announced the launch of a souped-up i-Book notebook computer on Wednesday with double the memory and hard-drive size of the previous model.

Apple Inc. Chief Executive Steve Jobs told a trade show in Tokyo that the new i-Book laptop would be launched in Japan on Friday at a price of 198,000 yen (\$1,822), the same as the previous i-Book. It will be \$1,599 in the United States.

Apple officials said the computer was being marketed starting Wednesday in the United States and would be available worldwide.

It also unveiled a new PowerBook portable computer with processors up to 500 MHz.

Jobs' announcement on the i-Book, aimed at Mac fans in Japan, where the Internet population is rapidly growing, came just a day before arch rival Microsoft Corp's long-awaited launch of its new business operating system, Windows 2000.

Jobs said the i-Book will have 64 megabytes of random-access memory (RAM) and a six gigabyte hard disk.

``We are going to double the memory, and double the disk size, and keep the price exactly the same," Jobs said.

He said Apple would introduce a new graphite-colored i-Book Special Edition, adding to the existing Blueberry and Tangerine versions.

The graphite iBook will sell for 218,000 yen and have a 366 MHz Power PC G3 processor, compared with 300 MHz for the blueberry and tangerine models.

Jobs said two new PowerBook models will be launched in Japan on Friday, one priced at 298,000 yen with 64 megabytes of RAM, a six gigabyte hard disk and a 400 MHz processor. The other, with 128 megabytes of memory, a 12-gigabyte hard drive and a 500 MHz processor, will be 398,000 yen.

He added Apple would launch a new line of Power Mac G4 desktop models with faster processors running at 400, 450 and 500 MHz for Japanese customers on Friday.

The three advanced models would be priced at 198,000 yen, 298,000 yen and 428,000 yen, respectively, in Japan, and \$1,599, \$2,499 and \$3,499 in the United States.

New i-Book models, PowerBook models and Power Mac G4 models are all available in the United States immediately.

Personal computer sales in Japan jumped 31 percent to hit a record 9.22 million last year, a sign of Japan transforming into one of the world's most Internet-savvy countries.

Jobs said Apple held the fourth-biggest market share for PCs in Japan at 7.8 percent in the last quarter of 1999, reflecting the popularity of its i-Book and i-Mac PCs. He gave no comparison with Apple's market share in previous quarters. "We would like to see the share go even further. We know we have the strongest product line Apple has ever had," Jobs said.

He also said the new Macintosh operating system to be launched this summer will be capable of operating in all key languages, meaning there will be no delay in its release from country to country.

Apple shares have jumped on Wall Street in recent days amid speculation that Jobs would unveil more new products, possibly a new PowerBook, or perhaps a new appliance-class device -- a stripped-down device designed just to access the Internet.

Window Washer Wipes Your Web Slate

Most of the time, software reviewing is like reaching into your Christmas stocking every day, only to discover a lump of coal. But every now and then, you pull out a diamond.

The latest diamond is Window Washer (the Mac version is called MacWasher), from Webroot.com, of Boulder, Colo. It's a very nifty utility that addresses two important issues that arise when you are on the Internet: privacy and disk space.

Traces of where you've been on the Net can appear in your browser cache, cookies, history and Windows document menus, recycle bin and temp directories. You can dispose of it yourself, of course, but it can take some time. And you can miss something.

So, if you would rather not share with a spouse your dogged pursuit of late-night studies in comparative anatomy, or with your boss your visits to employment sites, Window Washer is worth considering. And for a system shared by multiple users, it would seem to be a must.

The issue of disk space might at first seem to be a non-issue. How much space can a few cookies and temp files take?

It turns out that on both the home and office systems where Window Washer was tested, about 4 megabytes of space was recovered on the first run. And subsequent sessions routinely turned up saves of 50 to 100 kilobytes.

The software has a few bells and whistles, including automatic timed cleanings and the ability to assign files and folders to be cleaned. For the truly paranoid, the software can "bleach" removed files to Department of Defense standards by overwriting files with random characters up to 10 times, making the erased data unrecoverable.

Installation, from a single floppy disk, was simple and smooth. The user interface is pleasant and easy to understand. If, for some reason, you tire of the product, it includes an uninstall module.

Window Washer and MacWasher are available on the Web at www.webroot.com. You can download either for a free 30-day trial, after which the software just stops working. Or you can have a registered copy for \$29.95, with software upgrades free for one year from date of purchase. Webroot will mail you a diskette for an additional \$5 charge for shipping and handling.

The Web site is nicely done and doesn't assume the user has a doctorate in electrical engineering.

Window Washer wants to see 16 megabytes of RAM and 5 megabytes of hard disk space for Windows 95, 98, 2000 and NT 4.0. MacWasher wants to see Mac OS 8.0 or higher.

Colleges Complain Of Software Kinks

When students at Northwestern University wanted to register for winter classes last November, it was supposed to be as easy as point and click. The university was one of many that spent millions of dollars installing new software by Pleasanton, Calif.-based PeopleSoft so, among other things, students could register online instead of on campus.

But as hundreds of students tried to register from their rooms, point and click turned into crash and burn. Officials at PeopleSoft, one of the world's top business management software-makers, say that the problems were to be expected, especially as large universities scrambled to ready their systems for the year 2000.

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